

## **Replacing the Drive Wheel** (Manual Machine)

**This is a very complicated procedure that requires dismantling the machine. It is recommended that this procedure be done at our repair facility.**

**Please Note: Take care not to lose screws or other small parts you may encounter**

1. Set the Coin Selector Knob to "C". Set the Coin Gauge Knob to the Dime setting.
2. Open the top Tray and remove the two screws holding the Tray/Spout assembly onto the machine. Set the Tray/Spout assembly and the screws aside.
3. Next, you will be turning the machine upside down. When you do so, the weight of the machine will be on the Meter and the Coin Gauge Cover. On the front of the machine are the hooks where you hook your coin tubes on. Once you turn the machine over, take a wood block and set the machine so the hooks rest on the edge of the block. Choose a block high enough so the Meter and Coin Gauge are up off the surface of your work area.
4. With the machine still upside down, you can see the 3 screws that hold the base of the machine onto the rest of it. These screws run through the base and into 3 metal rods, called the Frame Stands. Remove these 3 screws and set them aside. The base should now lift off of the machine.
5. Remove the Crank Handle. To do this, hold the large plastic Drive Wheel with one hand, and turn the Crank Handle counter-clockwise. You may need to tap the handle lightly with a rubber mallet to loosen it. NEVER use a metal hammer, as this may damage the Crank Handle. It should unscrew and come off the machine; set it aside.
6. Once the handle is removed, you have to remove the Crank Collar as well. This is held on by a cotter pin on the inside of the machine, remove the cotter pin and the Collar should unscrew and come off the machine; set them aside.
7. The rectangular metal Wrapper that surrounds the machine should lift off. You'll need to work it off of the end of the Crank Handle screw; set it aside.

### **For machines with a cast iron Drive Unit Bracket:**

8A. Locate the two screws holding the Drive Unit Bracket onto the machine. Remove these screws and the Drive Unit should come off of the machine. There may also be pins helping to hold the bracket in place. If so, don't lose them. As well, pay attention to the underside of the bracket as there may be plastic or metal shims under the bracket. If there are, you will need to make sure you take note of them and how they are positioned so you can put them back later. Set the screws (and/or shims) aside.

8B. If you look at the Drive Unit, you'll see that the shaft of the Drive Wheel runs through the bracket, and is held on by a Collar on the other side. The Collar has a hexagonal set screw, so you'll need an Allen wrench to loosen it. Most of the time it is a 1/16" set screw, but some older models may be larger. Loosen the set screw, and once the Collar is loose the Drive Wheel should slide out of the bracket. Keep the Collar and discard the old Drive Wheel.

### **For machines with an aluminum Drive Unit Bracket:**

9. The two screws holding the bracket on are located down the two holes in the top of the bracket. You need a 5/32" allen wrench to remove the two screws. Remove the screws and the Drive Unit should come off of the machine. As well, pay attention to the underside of the bracket as there may be plastic or metal shims under the bracket. If there are, you will need to make sure you take note of them and how they are positioned so you can put them back later. Set the screws (and/or shims) aside. The old Drive Wheel should slide out of the Bracket; discard it.

**10. Please Note: If your machine is old, dirty, or rusty, you may have difficulty removing the Collar and/or the Drive Wheel. It may be necessary to use a punch to tap the Drive Wheel shaft through the bracket. If necessary, use care not to damage the bracket.**

**For machines with a cast iron Drive Unit Bracket:**

11. Take the new Drive Wheel, and apply a couple drops of oil along the shaft. The Drive Wheel should slide through the bracket. If you have difficulty, it may be necessary to take a round file and smooth out the inside of the bracket hole. As the end of the shaft comes through the other side of the bracket, slide the Collar on the shaft. Hold the Wheel so it's all the way through, and make sure the Collar is all the way on, and tighten the set screw on the Collar. Give the works a few turns to make sure it moves smoothly. Sometimes the Collar may be too tight against the bracket; adjust as necessary for both a snug fit and smooth turning.

**For machines with an aluminum block Drive Unit Bracket:**

12. Take the new Drive Wheel, and apply a couple drops of oil along the shaft. The Drive Wheel should slide through the bracket. If you have difficulty, it may be necessary to take a round file and smooth out the inside of the bracket hole.

13. Place the Drive Unit Bracket back on the machine, including any shims or pins that may have been present when you removed it. Make sure you lift up the Disc Shaft and Pinion Gear so that they are in the proper place to mesh the gears. Tighten the screws most of the way down, but leave just enough looseness so you can wiggle the Bracket.

14. Next, you need to mesh the Drive Wheel with the Disc gear. Basically, they need to be snug together without binding. You can wiggle the Drive Unit Bracket back and forth while looking at the gear mesh, and once you have it where you think it looks good, hold the bracket in place while tightening the two screws.

15. Turn the machine right side up and turn the disc by hand to test the smoothness of the gears. If it feels too tight or too loose, turn the machine upside down and readjust. You may need to do this a few times to get it right.

16. Once you feel it's okay, slide the Wrapper back on. As in Step 7, you'll need to work it on over the end of the Crank Handle screw.

17. Put the base back on. Snug down the screws, but don't tighten them. The Wrapper fits into a groove around the perimeter of the machine. You'll need to make sure the Wrapper is properly seated in the groove all the way around, before you tighten the screws. You may need to work it in a bit at a time as you tighten the screws.

18. Screw the Crank Collar back onto the Crank Screw. The grooves on the Crank Collar should line up with the hole in the Crank Screw. The collar should be screwed down almost but not quite touching the side of the Wrapper. Re-insert the Cotter pin, making sure to bend over the ends of the cotter pin so it stays in place.

19. Screw the Crank Handle back on. To do this, hold the large plastic Drive Wheel with one hand, and turn the Crank Handle clockwise. You may need to tap the handle lightly with a rubber mallet to properly tighten it. NEVER use a metal hammer, as this may damage the Crank Handle.

If all went well, the machine should be ready to test. Take a few (5-10) coins of your choice and set the Coin Gauge accordingly. Run the machine to verify operation. If you have any problems, we'll be happy to help, just give us a call.